

Amendments to the Specification:

Please replace paragraph beginning on page 8, line 4, with the following amended paragraph:

--Figure 1 shows two mechanisms for Interaction-dependent Enzyme Activation (IdEA). Figure 1A. Ligand-dependent circular permutations of an enzyme are formed by linking the native termini into an " $\alpha-\omega$ " domain, and severing the polypeptide chain in a solvent exposed loop the " μ " domain to generate new carboxy and amino termini $\mu 1$ and $\mu 2$ subdomains. The circularly permuted enzyme can $\mu 1$ and $\mu 2$ refold to form an active enzyme when and only when the new termini they are brought together by an interaction of interaction of heterologous domains fused to the new their termini. The interaction can be direct or mediated by a second molecule (the ligand). The ligand-binding domains can include but are not limited to single-chain antibody fragments (scFv) and constrained peptides scaffolded on a carrier protein (csp). Versatile hydrolytic enzymes such as β -lactamases can be used to confer multiple selectable phenotypes including antibiotic resistance, color, death (prodrug, for inhibitor screens), and auxotrophic growth. Figure 1B. Interaction-dependent fragment complementation requires enzyme α and ω fragments which can reform to form active enzyme when and only when they are brought together by an interaction of heterologous domains fused to their termini.--